

Curriculum vitae



Dr. rer. nat. Diana Pauly

Experimental Ophthalmology
University Hospital Regensburg
Regensburg, Germany

Personal Information

Name	Dr. rer. nat. Diana Pauly
Address work	University Hospital Regensburg Eye clinic, Experimental Ophthalmology Franz-Josef-Strauss-Allee 11 93053, Regensburg, Germany
Phone work	+49 941-944 9228
E-Mail address	Diana.Pauly@ukr.de
Homepages	http://www.uniklinikum-regensburg.de/kliniken-institute/Augenheilkunde/Forschung/Immuntherapien/ http://paulylab.brembs.net/wiki/
Languages	German – native English – fluent Swedish – conversational

Research Interests

- Within Complement:
 - Complement regulation in the murine and human retina
 - Antibodies for complement modulation
 - Function of complement regulators properdin and FHR1/3
 - Complement diagnostic from human samples

 - Outside Complement:
 - Generation of antibodies
 - Development of Multiplex-Immunoassays
 - Human and murine retina
 - Epithelial cells
 - Bacterial and plant toxins
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Education

Scientific Degrees

- 07/2008 PhD degree, Robert Koch-Institute, Centre for biological threats and special pathogens (Berlin, Germany), major advisors: B. Dorner (Robert Koch-Institute, Berlin) and B. Micheel (University Potsdam, Germany)
- 04/2005 Diploma degree in human biology, Ernst-Moritz-Arndt-University (Greifswald, Germany), main subject: Immunology (C. Schütt)

Scientific Career

- since 10/2014 Group Leader “Immune therapy for degenerative eye diseases”, Department of Ophthalmology (Head: Prof. H. Helbig), University Hospital Regensburg (Regensburg, Germany)
- 10/2012 – 09/2014 Group Leader “Immune therapy for degenerative eye diseases”, Institute of Human Genetics (Head: Prof. B.H.F. Weber), University Regensburg (Regensburg, Germany)
- 07/2008 – 09/2012 Postdoctoral Fellow, Robert Koch-Institute, Centre for biological threats and special pathogens (Head: Dr. B. Dorner) (Berlin, Germany)

Symposium/ Workshop organization

- 09.09. – 13.09.2018 Symposium “From compliment to insult: The complement system in retinal physiology and disease” ISER2018 (Belfast, Ireland)
- 25.05. – 27.05.2018 First Meeting of the “Complement Society of the Youth” (CoSY, Regensburg, Germany)
- 02.09.2016 Symposium “Complement system and retinal dysfunction” DOG2016 (Berlin, Germany)
- 07.11. 2011 BMBF-Workshop „Bead-based array technologies“ Robert Koch-Institut (Berlin, Germany)

Publications

Peer-reviewed original research

2017

- Gallenkamp J, Spanier G, Woerle E, Englbrecht M, Kirschfink M, Greslechner R, Braun R, Schaefer N, Bauer R, **Pauly D**. 2017 *A novel multiplex detection array revealed systemic complement activation in oral squamous cell carcinoma*. *Oncotarget*. 9(3):3001-3013. doi: 10.18632/oncotarget.22963, IF 5.168
- Lemmer K, Howaldt S, Heinrich R, Roder A, Pauli G, Dorner BG, **Pauly D**, Mielke M, Schwebke I, Grunow R. 2017 *Test methods for estimating the efficacy of the fast-acting disinfectant peracetic acid on surfaces of personal protective equipment*. *J Appl Microbiol*. doi: 10.1111/jam.13575., IF 2.099

3. Schäfer N, Grosche A, Schmitt S, Braunger BM, **Pauly D**. 2017 *Complement components showed a time-dependent local expression pattern in constant and acute white light induced photoreceptor damage*. Front Mol Neurosci. 10:197. doi: 10.3389/fnmol.2017.00197. eCollection 2017, IF 5.076
4. Micklisch S, Lin Y, Jacob S, Karlstetter M, Dannhausen K, Dasari P, von der Heide M, Dahse HM, Schmoelz L, Grassmann F, Alene M, Fauser S, Neumann H, Lorkowski S, **Pauly D**, Weber BH, Joussen AM, Langmann T, Zipfel PF, Skerka C. *Age-related macular degeneration associated polymorphism rs10490924 in ARMS2 results in deficiency of a complement activator*. J Neuroinflammation. 2017 Jan 5;14(1):4. doi: 10.1186/s12974-016-0776-3. IF 4.667

2016

5. Schäfer N, Grosche A, Reinders J, Hauck SM, Pouw RB, Kuijpers TW, Wouters D, Ehrenstein B, Enzmann V, Zipfel PF, Skerka C, **Pauly D** *Complement Regulator FHR-3 Is Elevated either Locally or Systemically in a Selection of Autoimmune Diseases*. Front. Immunol. 2016 7:542. doi: 10.3389/fimmu.2016.00542 IF 6.429
6. Chen Q, Manzke M, Hartmann A, Büttner M, Amann K, **Pauly D**, Wiesener M, Skerka C, Zipfel PF. *Complement Factor H-Related 5-Hybrid Proteins Anchor Properdin and Activate Complement at Self-Surfaces*. J Am Soc Nephrol. 2016 May;27(5):1413-25. doi: 10.1681/ASN.2015020212. IF 8.491
7. Stern D, **Pauly D**, Zydek M, Miller L, Piesker J, Laue M, Lisdat F, Dorner MB, Dorner BG, Nitsche A *Development of a Genus-Specific Antigen Capture ELISA for Orthopoxviruses - Target Selection and Optimized Screening*. PLoS One. 2016 Mar 1;11(3):e0150110. doi: 10.1371/journal.pone.0150110 IF 3.057
8. Stern D, **Pauly D**, Zydek M, Müller C, Avondet MA, Worbs S, Lisdat F, Dorner MB, Dorner BG. *Simultaneous differentiation and quantification of ricin and agglutinin by an antibody-sandwich surface plasmon resonance sensor*. Biosens Bioelectron. 2016 Apr 15;78:111-7. doi: 10.1016/j.bios.2015.11.020. IF 7.476

2014

9. **Pauly D**, Nagel BM, Reinders J, Killian T, Wulf M, Ackermann S, Ehrenstein B, Zipfel PF, Skerka C, Weber BHF *A Novel Antibody against Human Properdin Inhibits the Alternative Complement System and Specifically Detects Properdin from Blood Samples*, PLoS ONE 2014 May; 9(5): e96371. ISSN 1932-6203, IF 3.234

2013

10. Stevens GB, Silver DA, Zgaga-Griesz A, Bessler WG, Vashist SK, Patel P, Achazi K, Strotmeier J, Worbs S, Dorner MB, Dorner BG, **Pauly D**, Rummel A, Urban GA, Krueger M *Bioluminescence assay for the highly sensitive detection of botulinum neurotoxin A activity*, Analyst. 2013 Oct; 138(20): 6154-62. ISSN 0003-2654, IF 4.033

2012

11. **Pauly D**, Worbs S, Kirchner S, Shatohina O, Dorner MB, Dorner BG *Real-time Cytotoxicity Assay for Rapid and Sensitive Detection of Ricin from Complex Matrices*, PLoS ONE 2012 Apr, 7(4): e35360. doi:10.1371/journal.pone.0035360 ISSN 1932-6203, IF 3.730

2011

12. **Pauly D**, Chacana PA, Calzado EG, Brembs B, Schade R.

IgY-technology, the Immunization of Laying Hen and the Extraction of Antibodies from Egg Yolk by Polyethylene Glycol (PEG) Precipitation, JOVE. 2011 May 1;(51). pii: 3084. doi: 10.3791/3084. IF 1.113

2010

13. Kirchner S, Krämer KM, Schulze M, **Pauly D**, Jacob D, Gessler F, Nitsche A, Dorner BG, Dorner MB. *Pentaplexed quantitative real-time PCR assay for the simultaneous detection and quantification of botulinum neurotoxin-producing clostridia in food and clinical samples*, Appl Environ Microbiol. 2010 Jul;76(13):4387-95. ISSN 0099-2240, IF 3.823
14. Weingart OG, Schreiber T, Mascher C, **Pauly D**, Dorner MB, Berger TF, Egger C, Gessler F, Loessner MJ, Avondet MA, Dorner BG. *The case of botulinum toxin in milk: experimental data*, Appl Environ Microbiol. 2010 May;76(10):3293-300. ISSN 0099-2240, IF 3.823
15. Kull S, **Pauly D**, Störmann B, Kirchner S, Stämmler M, Dorner MB, Lasch P, Naumann D, Dorner BG *Multiplex detection of microbial and plant toxins by immunoaffinity enrichment and matrix-assisted laser desorption/ionization mass spectrometry*. Anal Chem. 2010 Apr 1;82(7):2916-24. ISSN 0003-2700, IF 5.886

2009

16. **Pauly D**, Kirchner S, Schreiber T, Stoermann B, Kaulfuss S, Schade R, Zbinden R, Avondet MA, Dorner MB, Dorner BG *Simultaneous quantification of five bacterial and plant toxins from complex matrices using a multiplexed fluorescent magnetic suspension assay*. Analyst. 2009 Oct;134(10):2028-39. ISSN 0003-2654, IF 4.033
17. **Pauly D**, Dorner M, Zhang X, Hlinak A, Dorner B, Schade R *Monitoring of laying capacity, immunoglobulin Y concentration, and antibody titer development in chickens immunized with ricin and botulinum toxins over a two-year period*. Poult Sci. 2009 Feb;88(2):281-90. ISSN 0032-5791, IF 1.685

2008

18. Zhang X, Kurth A, **Pauly D**, Pauli G, Schade R *Application of hightitred IgY antibodies in orthopox virus diagnostics*. J Chin Pharmaceut Sci. 2008 Sep;17(3):183-91.

Peer-reviewed review articles

2016

1. Pujol-Lereis L*, Schäfer N*, Kuhn L, Rohrer B, **Pauly D** *Interrelation between oxidative stress and complement dysregulation in models of age-related macular degeneration*. Adv Exp Med Biol. 2016;854:87-93. doi: 10.1007/978-3-319-17121-0_13. ISSN 0065-2598, IF 1.953

2015

2. **Pauly D**, Hanack K *How to avoid pitfalls in antibody use*. F1000Res. 2015 Sep 7;4:691. doi:10.12688/f1000research.6894.1.
3. Volz C, **Pauly D** *Challenges of antibody therapies in age-related macular degeneration*. Eur J Pharm Biopharm. 2015 Sep;95(Pt B):158-72. doi: 10.1016/j.ejpb.2015.02.020, IF 3.975

2014

4. Weber BHF, Issa PC, **Pauly D**, Herrmann P, Grassmann F, Holz FG *The role of the complement system in age-related macular degeneration*. Dtsch Arztebl Int 2014 Feb; 111 (8):133-8 ISSN 1866-0452, IF 3.738

2012

5. Worbs S, Köhler K, **Pauly D**, Avondet MA, Schaer M, Dorner MB, Dorner BG *Ricinus communis* intoxications in human and veterinary medicine – a summary of real cases, *Toxins* (Basel). 2011 Oct;3(10):1332-72. ISSN 2072-6651, IF 3.571

Other journal articles

Ellerbrok H, Dorner BG, Grunow R, Jacob D, Krueger R, Niedrig M, Nitsche A, **Pauly D**
Preparation of a Franco-German pilot proficiency test for the diagnoses of biothreat agents,
EuroRef 2012, 7, ER07-12RE03: 36-40

Intervention

Dorner B, Krämer ME, **Pauly D**

Sandwich-ELISA for the detection of all human pathogenic botulinum neurotoxin complexes (BoNT/A, /B, /E, /F-complexes) with in-house monoclonal antibodies (mAb clones Pan1343, Pan1361; panIgY H74). RKI, 2011 July